

I claim:

1 1. A coated phosphor comprising a powder, formed by particles, of a
2 phosphor, the phosphor particles being coated with a vitreous material, wherein the
3 vitreous material is silicate glass.

1 2. A coated phosphor as claimed in claim 1, wherein the vitreous material is
2 polymethylsilanol, in particular based on alkylsilicic acid, the alkyl groups being capable,
3 in particular, of containing up to six carbon atoms.

1 3. A coated phosphor as claimed in claim 1, wherein the phosphor is
2 selected from the group of garnets, chlorosilicates, thiogallates, nitridosilicates and
3 aluminates.

1 4. A coated phosphor as claimed in claim 1, wherein the layer thickness is
2 between 1 nm and 10 μm .

1 5. A light-emitting device having at least one radiation source that emits in
2 the range of 150 to 600 nm, and having a phosphor layer that converts the light of the
3 light source at least partially into longer-wave radiation, the phosphor layer being
4 formed by particles that are coated in accordance with claim 1.

1 6. A method for producing a coated phosphor, with the following method
2 steps:

3 a) introducing uncoated phosphor powder and organosilanol, in particular
4 alkylsilicic acid, into organic solvents, in particular ethanol;

5 b) boiling down the solution to evaporate the highly volatile components at a
6 low temperature T1 in the range of 30 to 55°C;

7 c) distilling off the high-boiling components until vitrified aggregates are
8 produced at a higher temperature T2 in the range of 55 to 120°C;

- 9 d) drying the powder; and
- 10 e) condensing the coating to form silicate glass at an even higher
- 11 temperature T3 in the range of 250 to 350°C.